

## TEMPORARY SHORING NOTES

### SHORING LOCATION #1 (QUANTITY = 216 SF)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE END BENT CONSTRUCTION FROM STATION 15+93 ±-L-, 0' LT, TO STATION 16+20 ±-L-, 0' LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 15+93 ±-L-, 0' LT, TO STATION 16+20 ±-L-, 0' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF  
 FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 1184 FT

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 15+93 ±-L-, 0' LT, TO STATION 16+20 ±-L-, 0' LT. MAY NOT PENETRATE BELOW ELEVATION 1172 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 15+93 ±-L-, 0' LT, TO STATION 16+20 ±-L-, 0' LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 15+93 ±-L-, 0' LT, TO STATION 16+20 ±-L-, 0' LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 15+93 ±-L-, 0' LT, TO STATION 16+20 ±-L-, 0' LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

### SHORING LOCATION #2 (QUANTITY = 176 SF)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE END BENT INSTALLATION FROM STATION 17+08 ±-L-, 0' LT, TO STATION 17+30 ±-L-, 0' LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 17+08 ±-L-, 0' LT, TO STATION 17+30 ±-L-, 0' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF  
 FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 1184

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 17+08 ±-L-, 0' LT, TO STATION 17+30 ±-L-, 0' LT MAY NOT PENETRATE BELOW ELEVATION 1168 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 17+08 ±-L-, 0' LT, TO STATION 17+30 ±-L-, 0' LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 17+08 ±-L-, 0' LT, TO STATION 17+30 ±-L-, 0' LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 17+08 ±-L-, 0' LT, TO STATION 17+30 ±-L-, 0' LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

### SHORING LOCATION #3 (QUANTITY = 60 SF)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE END BENT CONSTRUCTION FROM STATION 15+93 ±-L-, 2' LT, TO STATION 16+05 ±-L-, 2' LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 15+93 ±-L-, 2' LT, TO STATION 16+05 ±-L-, 2' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF  
 FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 1184 FT

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 15+93 ±-L-, 2' LT, TO STATION 16+05 ±-L-, 2' LT. MAY NOT PENETRATE BELOW ELEVATION 1172 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 15+93 ±-L-, 2' LT, TO STATION 16+05 ±-L-, 2' LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 15+93 ±-L-, 2' LT, TO STATION 16+05 ±-L-, 2' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

WHEN BACKFILL FOR BRIDGE APPROACH FILLS OVERLAPS WITH THE REINFORCED ZONE OF TEMPORARY WALLS, USE SHORING BACKFILL OR BACKFILL MATERIAL REQUIRED FOR BRIDGE APPROACH FILLS, WHICHEVER IS BETTER, IN THE REINFORCED ZONE OF TEMPORARY WALLS.

### SHORING LOCATION #4 (QUANTITY = 60 SF)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE END BENT INSTALLATION FROM STATION 17+18 ±-L-, 2' LT, TO STATION 17+30 ±-L-, 2' LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 17+18 ±-L-, 2' LT, TO STATION 17+30 ±-L-, 2' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF  
 FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 1184

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 17+18 ±-L-, 2' LT, TO STATION 17+30 ±-L-, 2' LT MAY NOT PENETRATE BELOW ELEVATION 1168 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

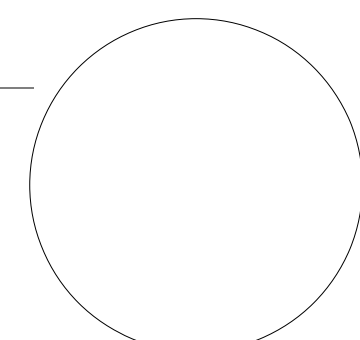

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 17+18 ±-L-, 2' LT, TO STATION 17+30 ±-L-, 2' LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 17+18 ±-L-, 2' LT, TO STATION 17+30 ±-L-, 2' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

WHEN BACKFILL FOR BRIDGE APPROACH FILLS OVERLAPS WITH THE REINFORCED ZONE OF TEMPORARY WALLS, USE SHORING BACKFILL OR BACKFILL MATERIAL REQUIRED FOR BRIDGE APPROACH FILLS, WHICHEVER IS BETTER, IN THE REINFORCED ZONE OF TEMPORARY WALLS.

TOTAL SHORING QUANTITY = 512 SF

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTC SECTION ON MAY 7, 2020, AND SEALED BY A PROFESSIONAL ENGINEER, SHIPING YANG, LICENSE #031361.

APPROVED: _____  DATE: _____  <div style="text-align: center;">                       SEAL                 </div>		<h2 style="margin: 0;">TEMPORARY SHORING NOTES</h2>
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>		